

AMENDMENT

IN THE CLAIMS:

Please amend claims 1, 4, 15, 16 and 39 to read as follows; and please add new claims 59, 60, 61, 62 and 63:

1. (Twice Amended) A polysaccharide-protein conjugate or oligosaccharide-protein conjugate comprising an N-propionated saccharide directly coupled to a protein at a β -position of a propionate moiety; wherein the N-propionated saccharide directly coupled to the protein at the β -position of the propionate moiety elicits protective antibodies; wherein the N-propionated saccharide is de-N-acetylated and N-acryloylated at the de-N-acetylated terminus; and wherein the protein is a bacterial protein or a synthetic protein containing lysine or cysteine residues. *Saccharide*

4. (Twice Amended) The conjugates according to claim 1 wherein the saccharide is derived from a polysaccharide obtained from *Escherichia coli*, *Meningococcus*, *Pneumococcus*, *Streptococcus*, *Neisseria*, *Salmonella*, *Klebsiella*, or *Pseudomonas*.

15. (Twice Amended) The conjugates according to claim 1 wherein the saccharide is derived from a polysaccharide obtained from group B *Streptococcus* type III, and wherein the protein is tetanus toxoid.

16. (Twice Amended) A polysaccharide-protein conjugate or oligosaccharide-protein conjugate that elicits protective antibodies produced by a method comprising:

- A) de-N-acetylating an isolated polysaccharide or oligosaccharide using a de-N-acetylating reagent to form a de-N-acetylated polysaccharide or a de-N-acetylated oligosaccharide;
- B) N-acryloylating the de-N-acetylated polysaccharide or the de-N-acetylated oligosaccharide at a de-N-acetylated terminus with an acryloylating reagent to form an N-propionated polysaccharide or an N-propionated oligosaccharide, and
- C) directly coupling at a β -position of a propionate moiety of the N-propionated polysaccharide or the N-propionated oligosaccharide to a protein to form the

D3 polysaccharide-protein conjugate or the oligosaccharide protein conjugate; wherein the protein is a bacterial protein or a synthetic protein containing lysine or cysteine residues.

Δ₄ Sub F21 39. (Twice Amended) The vaccine according to claim 38 wherein the bacteria is selected from the group consisting of *Escherichia coli*, Meningococcus, Pneumococcus, Streptococcus, Neisseria, Salmonella, Klebsiella, and Pseudomonas.

59. (Additional) The conjugates according to claim 1, wherein the saccharides are at least 95% N-acryloylated.

60. (Additional) The conjugates according to claim 16, wherein the de-N-acetylated polysaccharide or the de-N-acetylated oligosaccharide is at least 95% N-acryloylated.

Sub F21 D5 61. (Additional) The conjugates according to claim 1, wherein the N-propionated saccharides are at least 50% de-N-acetylated.

62. (Additional) The conjugates according to claim 16, wherein the de-N-acetylated polysaccharide or the de-N-acetylated oligosaccharide is at least 50% de-N-acetylated.

2 63. (Additional) The conjugates according to any one of claim 1 and claim 16, wherein the bacterial protein is selected from the group consisting of tetanus toxoid, diphtheria toxoid, cholera toxin subunit B, *Neisseria meningitidis* outer membrane proteins, pneumolysoid, C-β protein from group B Streptococcus, *Pseudomonas aeruginosa* toxoid, and pertussis toxoid.

REMARKS

No new matter is introduced by the amendments.

Claim 1 has been amended in order to more clearly state that an aspect of the claimed conjugates is the ability to elicit protective antibodies. The specification discloses this aspect: "An aspect of the invention is a method of eliciting the production of antibodies in mammals using the β-propionamido-linked polysaccharide-protein conjugates that protect the mammals against infection or disease." (page 4, last paragraph). Further, the specification